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(21) Application number: **2001320383**

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(71) Applicant: **NATIONAL INSTITUTE OF
ADVANCED INDUSTRIAL &
TECHNOLOGY**

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(54) OPTICAL ELEMENT AND METHOD FOR MANUFACTURING THE SAME

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a very inexpensive and highly efficient nonlinear optical element which is operable in a communication wavelength region by applying single wall carbon nanotubes to the optical element, and to provide a method for manufacturing the optical element.

SOLUTION: The optical element has a thin film consisting of the laminated single wall carbon nanotubes and utilizes its saturable absorbing function. The optical element is manufactured by preparing a dispersion liquid by dispersing the single wall carbon nanotubes in a dispersion medium and forming the thin film by spray-coating a material to be coated with the dispersion liquid.

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TOKUMOTO MADOKA;
TATSUURA SATOSHI;
ACHINAMI HIROTSUGU;
KATAURA HIROMICHI;**Assignee:** NATIONAL INSTITUTE OF ADVANCED INDUSTRIAL & TECHNOLOGY

FUJI XEROX CO LTD

[News, Profiles, Stocks and More about this company](#)**Published / Filed:** 2003-04-23 / 2001-10-18**Application** JP2001000320383**Number:****IPC Code:** [G02F 1/355](#); [C01B 31/02](#); [G02F 1/01](#); [G11B 7/24](#); [G11B 7/26](#);**ECLA Code:** [G02B1/10](#); [G02F1/35D](#); [G02F1/361](#); [G11B7/24](#);**Priority Number:** 2001-10-18 JP2001000320383**Abstract:** PROBLEM TO BE SOLVED: To provide a very inexpensive and highly efficient nonlinear optical element which is operable in a communication wavelength region by applying single wall carbon nanotubes to the optical element, and to provide a method for manufacturing the optical element.

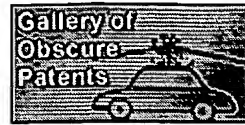
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